

In the Claims

1-34 (Cancelled)

35. (New) A capsule pattern endoscope comprising:

an intelligent capsule comprising:

an outer shell having a front cover, a rear cover and a PCB structure operatively connected thereto;

an image information acquiring device operatively positioned relative to the outer shell and comprising:

an image sensor, operatively positioned within the outer shell; and

a lens optical system, operatively positioned within the outer shell and operatively connected to the image sensor;

an image signal processing and transmitting device operatively positioned within the outer shell;

a light source, operatively positioned within the outer shell;

a power source, operatively positioned within the outer shell and operatively connected to the image information acquiring device, the signal processing and transmitting device and the light source and;

an image receiving device operatively positioned relative to the intelligent capsule.

36. (New) The capsule pattern endoscope of claim 35, wherein the image signal processing and transmitting device further comprises:

antenna structure operatively positioned on the rear cover of the outer shell.

37. (New) The capsule pattern endoscope of claim 35, wherein the image information acquiring device, the image signal processing and transmitting device and the light source operatively positioned within the outer shell are assembled on a flexible circuit board in an integrated manner wholly or partly.

38. (New) The capsule pattern endoscope of claim 35 wherein the image information acquiring device further comprises:

an image compression processor.

39. (New) The capsule pattern endoscope of claim 35, wherein the image signal processing and transmitting device further comprises:

a microwave transceiver capable of sending compressed image data.

40. (New) The capsule pattern endoscope of claim 38 wherein the image compression processor includes an image-cutting device.

41. (New) The capsule pattern endoscope of claim 3, wherein the image compression processor includes an image compression rate adjusting device.

42. (New) The capsule pattern endoscope of claim 35, wherein the image sensor comprises:

a CMOS image sensor.

43. (New) The capsule pattern endoscope of claim 35, wherein the image compression processor comprises a CPU, DSP or ASIC processor.

44. (New) The capsule pattern endoscope of claim 35, wherein the microwave transceiver comprises:

a microwave communication chip.

45. (New) The capsule pattern endoscope of claim 35, wherein the image-receiving device includes an external controller compatible with corresponding controller of the intelligent capsule.

46. (New) The capsule pattern endoscope of claim 45, wherein the external controller is capable of sending microwave control commands to the intelligent capsule so that the controller intelligent capsule completes the commands received.

47. (New) The capsule pattern endoscope of claim 35 further comprising:

a flexible circuit board.

48 (New) The capsule pattern endoscope of claim 47, wherein the camera chip, the DSP chip in the wireless emission chip are operatively positioned on the flexible circuit board.

49.(New) The capsule pattern endoscope of claim 48, wherein the flexible circuit board comprises a cylindrical like shape.

50. (New) The capsule pattern endoscope of claim 35, wherein the cylindrical like shaped flexible circuit board is operatively connected to the power source.

51. (New) The capsule pattern endoscope of claim 50, wherein the cylindrical like shaped flexible circuit board and the power source are operatively positioned inside the outer shell.

52. (New) A method of assembling a capsule pattern endoscope comprising:

- providing an outer shell;
- providing a flexible circuit board;
- providing a camera device;
- providing a DSP device;
- providing a wireless emission device;
- assembling the camera device, the DSP device and the wireless emission device on the flexible circuit board;
- manipulating the flexible circuit board having the camera device, the DSP device in the wireless emission device mounted thereon into a cylindrical like structure;
- operatively positioning the cylindrical like structured flexible circuit board into the outer shell;
- providing a power source and operatively positioning the power source inside the outer shell;
- operatively connecting the power source to the flexible circuit board operatively positioned inside the outer shell; and
- operatively positioning wireless transmission structure of the outer surface of the outer shell for communications with an image receiving device operatively positioned relative to the intelligent capsule.